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**REMARKS**

Applicants' undersigned attorney thanks the Examiner for her comments. Applicants respectfully request reconsideration of this patent application, particularly in view of the above Amendment and the following remarks. Currently, Claims 1-39 and 57-63 are pending.

**Amendments to the Claims**

Claims 1-39 and 57-63 have been examined with no claims being allowed. Applicants have amended Claims 1 and 21, and request cancellation of Claims 59 and 62. No new matter has been added by this Amendment.

Claims 1 and 21 have each been amended to include the limitations of Claims 59 and 62, respectively, in addition to the clarification that the units of edge compression are gm-cm "of energy to 50% compression." Support for this additional language is provided on page 36, lines 15-21, of the specification, as well as in Table 4 on page 37, as well as on page 42, line 1, through page 43, line 13, of the specification. Furthermore, Applicants respectfully request cancellation of Claims 59 and 62.

No additional fee is due for this Amendment because the number of independent claims remains unchanged and the total number of claims has been reduced.

**Claim Rejections - 35 U.S.C. §112**

The rejection of Claims 59 and 62 under 35 U.S.C. §112, first paragraph, as failing to comply with the written description requirement is respectfully traversed. Applicants have amended Claims 1 and 21 to include the limitations of Claims 59 and 62, respectively, in addition to specifying that the edge compression limitation is between about 2726 and about 3615 gm-cm of energy to 50% compression. Applicants have requested cancellation of Claims 59 and 62.

The procedure for determining the edge compression of the absorbent pad is described in detail from page 42, line 1, through page 43, line 13, of the specification. The same Edge Compression Test Procedure is disclosed in U.S. Patent

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No. 6,214,274 issued April 10, 2001, to Melius et al., cited at page 28, lines 1-4, of the specification and incorporated therein by reference. Although the same test procedure was described in the Melius et al. reference, different test output was used in the Melius et al. reference. More particularly, at page 42, lines 18-20, of the specification, the Edge Compression Test Procedure states that "[t]he maximum force obtained in compressing the sample to 50% of its width...is recorded," thus indicating to one skilled in the art that in order to obtain the maximum force in the specified compression cycle, a continuum of force readings as a function of compression distance must be obtained up to a distance of 50% of the width of the sample. Test results capture multiple force readings throughout the compression cycle, including the maximum force obtained during the cycle, the value used by Melius et.al. Results, using the same recorded data, can also be reported as a calculation of the area under the force versus compression distance curve, or the energy to 50% compression. This is the standard practice for mechanical property testing like tensile and compression testing. The energy to 50% compression values were reported in the examples in the present application because this data is useful in quantifying flexibility, thereby enabling differentiation of materials based on their flexibility. Further support for Claims 59 and 62 is provided at page 18, lines 3-5, referring to the Edge Compression Test Procedure on pages 42-43; as well as at page 36, lines 15-21, of the specification, which describes the edge compression data in Table 4.

For at least the reasons given above, Applicants respectfully submit that amended Claims 1 and 21, which include the limitations of Claims 59 and 62, are fully supported by the original disclosure of the invention. Accordingly, reconsideration and withdrawal of this rejection is respectfully requested.

#### **Claim Rejections - 35 U.S.C. §102**

The rejection of Claims 1-11, 15-30, 34-36, 58, 60, 61, and 63 under 35 U.S.C. §102(b) as being anticipated by Laux et al. (U.S. Patent No. 5,827,259) is respectfully traversed, particularly in view of the above Amendment and the following remarks.

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Laux et al. disclose a retention portion 48 within an absorbent article. The retention portion 48 can include a matrix of hydrophilic fibers mixed with particles of high-absorbency material in a fiber-to-particle ratio which is not more than about 75:25, or not less than about 25:75. The retention portion 48 includes particles of superabsorbent material that can be selected to provide an Absorbent Capacity (AC) value which is within the range of about 32-48. The retention portion 48 can be configured with a bulk thickness which is not more than about 0.6 cm (6 mm). The density of the retention portion 48 can be calculated from its basis weight and thickness. The average composite basis weight of the retention portion 48 can be within the range of about 400-900 gsm.

For a reference to anticipate a claim, the reference must disclose each and every element or limitation of the claim. Laux et al. do not disclose each and every element or limitation of currently amended independent Claims 1 or 21. Applicants' invention as recited in currently amended independent Claims 1 and 21 requires a single, *densified* layer of superabsorbent material and pulp fluff having an edge compression between about 2726 and about 3615 gm-cm of energy to 50% compression.

Laux et al. fail to disclose a *densified*, single-layer, absorbent pad including between 30 and 85 wt% superabsorbent material and between 15 and 70 wt% pulp fluff, having a density greater than about 0.28 grams per cubic centimeter (g/cc) or greater than about 0.30 g/cc, and a thickness in a range of between 0.5 and 3.0 millimeters, with an edge compression between about 2726 and about 3615 gm-cm of energy to 50% compression.

As explained at page 4, line 21 – page 5, line 6, of the present application, it is difficult to achieve thin absorbent composites that also have sufficient absorbent capacity and flexibility. Often when pads are densified to create high capacity in a thin form, the resulting pads are stiff. However, when thin pads are made having a lower density, the resulting pads may be flexible but lack sufficient absorbent capacity. Low density, high capacity pads that are flexible are generally thick and bulky. Applicants' absorbent pad is thin (between 0.5 and 3.0 mm), has sufficient absorbent capacity (between about 14 and 40 g/g), and is flexible (edge

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compression between about 2726 and about 3615 gm-cm of energy to 50% compression). These balanced properties are achieved through high levels of superabsorbent polymer (SAP) and high density compaction of the formed pads (page 13, lines 10-12).

Laux et al. fail to disclose an absorbent pad that is thin, *flexible*, and possesses sufficient absorbent capacity. Additionally, Laux et al. fail to disclose an absorbent pad that is *densified* to achieve such thinness, flexibility, and absorbent capacity. Instead, Laux et al. disclose a retention portion that can have a thickness of up to 6 mm, as opposed to a thickness between 0.5 and 3.0 mm in Applicants' invention, and fails to disclose any level of flexibility of the retention portion. Because Laux et al. fail to disclose any densification of the retention portion, it is further unlikely that a person skilled in the art would achieve Applicants' claimed densified, thin, flexible, absorbent pad through routine experimentation based on the teachings of Laux et al. because Laux et al. fail to disclose or suggest an absorbent pad that is considerably thin yet possesses absorbent capacity as well as flexibility, and further fails to disclose or suggest a densified absorbent pad that achieves such a balance of qualities.

For at least the reasons presented above, Applicants respectfully submit that currently amended Claims 1 and 21 are not anticipated by Laux et al. Because Claims 2-11, 15-20, 58, and 60 depend from Claim 1, and Claims 22-30, 34-46, 61, and 63 depend from Claim 21, these claims are also not anticipated by Laux et al. Thus, Applicants respectfully request withdrawal of this rejection.

### Claim Rejections - 35 U.S.C. §103

#### A. Laux et al. in view of Coles

The rejection of Claims 12-14 and 31-33 under 35 U.S.C. §103(a) as being unpatentable over Laux et al. as applied to Claims 1 and 21 above, and further in view of Coles (U.S. Patent No. 5,722,967) is respectfully traversed.

Laux et al. fail to disclose or suggest a *densified*, flexible, single-layer, absorbent pad having an edge compression between about 2726 and about 3615 gm-cm of energy to 50% compression. Laux et al. further fail to disclose or suggest such

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an absorbent pad wherein the superabsorbent material has a gel strength of at least 0.65.

Coles discloses a sanitary napkin having shaping means, in the form of score lines and glue lines, for controlling deformation of the napkin's absorbent core upon lateral compression. The napkin may include high gel strength absorbent gelling materials having an absorbent gel strength of more than 1.2 kPa after 5 minutes. Such absorbent gel strength, measured in kPa, is the measure of pressure or force against the gel, thus representing a mechanical modulus. In contrast, the ranges of absorbent gel strength disclosed in the present invention are determined by dividing 0.9 AUL capacity by centrifuge retention capacity (CRC), which is essentially a ratio of the amount of liquid, i.e., saline, that the SAP absorbed under no pressure versus the amount of liquid that the SAP absorbed under pressure. More particularly, the gel strength in the present invention involves an absorbency under load factor which is more related to in-use performance. Although the same term "gel strength" is used in both the present application and in Coles, these terms represent completely different measurements of material properties.

Neither Laux et al. nor Coles, nor the combination thereof, disclose or suggest a *densified*, flexible, single-layer, absorbent pad having an edge compression between about 2726 and about 3615 gm-cm of energy to 50% compression, and including superabsorbent material having a gel strength of at least 0.65, wherein the gel strength is determined by dividing 0.9 AUL capacity by CRC.

For at least the reasons given above, Applicants respectfully submit that the teachings of Laux et al. in view of Coles fail to disclose or suggest Applicants' claimed invention. Accordingly, reconsideration and withdrawal of this rejection is respectfully requested.

**B. Laux et al.**

The rejection of Claims 37-39 under 35 U.S.C. §103(a) as being unpatentable over Laux et al. as applied to Claim 21 above is respectfully traversed.

As explained above, Laux et al. fail to disclose or suggest a *densified*, flexible, single-layer, absorbent pad having an edge compression between about 2726 and about 3615 gm-cm of energy to 50% compression. Laux et al. further fail to

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disclose or suggest any range of concentration variation of a superabsorbent material gradient within such an absorbent pad.

Since Laux et al. do not disclose or suggest a *densified*, flexible, single-layer, absorbent pad having an edge compression between about 2726 and about 3615 gm-cm of energy to 50% compression, Laux et al. thus fail to disclose or suggest such an absorbent pad having any variation of concentration of superabsorbent material within a gradient in such an absorbent pad.

For at least the reasons given above, Applicants respectfully submit that the teachings of Laux et al. fail to disclose or suggest Applicants' claimed invention. Accordingly, reconsideration and withdrawal of this rejection is respectfully requested.

**C. Laux et al. in view of Pieniak et al.**

The rejection of Claim 57 under 35 U.S.C. §103(a) as being unpatentable over Laux et al. as applied to Claim 1 above, and further in view of Pieniak et al. (U.S. Patent No. 5,451,442) is respectfully traversed.

As explained above, Laux et al. fail to disclose or suggest a *densified*, flexible, single-layer, absorbent pad having an edge compression between about 2726 and about 3615 gm-cm of energy to 50% compression. Laux et al. further fail to disclose or suggest such an absorbent pad having a higher basis weight in a first zone than in a second zone.

Pieniak et al. disclose an absorbent panel structure for a disposable garment that includes one or more longitudinally elongated areas or grooves of reduced thickness and basis weight formed in the panel. A rearward section of the panel has a mean basis weight that is less than the mean basis weight of the forward section of the panel.

Neither Laux et al. nor Pieniak et al., nor the combination thereof, disclose or suggest a *densified*, flexible, single-layer, absorbent pad having an edge compression between about 2726 and about 3615 gm-cm of energy to 50% compression, with a higher basis weight in a first zone than in a second zone.

For at least the reasons given above, Applicants respectfully submit that the teachings of Laux et al. in view of Pieniak et al. fail to disclose or suggest

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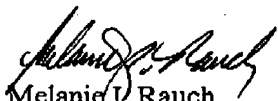
Applicants' claimed invention. Accordingly, reconsideration and withdrawal of this rejection is respectfully requested.

#### Conclusion

Applicants intend to be fully responsive to the outstanding Office Action. If the Examiner detects any issue which the Examiner believes Applicants have not addressed in this response, Applicants' undersigned attorney requests a telephone interview with the Examiner.

Applicants sincerely believe that this Patent Application is now in condition for allowance and, thus, respectfully request early allowance.

Respectfully submitted,

  
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